

2. (Amended) The video game system according to claim ~~1~~¹/₄, wherein the interface is programmable to poll the controllers a predetermined number of times between each vertical blanking interval.

A10 3. (Amended) The video game system according to claim ~~1~~¹/₄, wherein the interface is programmable to poll the controllers based on a number of video lines.

4. (Amended) The video game system according to claim ~~1~~¹/₄, wherein the interface polls a status of the controllers.

6. (Amended) The video game system according to claim 5, wherein the player inputs comprise button presses.

7. (Amended) The video game system according to claim 5, wherein the player inputs comprise positions of a user manipulable joystick.

Sub, B' > 14. (Amended) A video game system, comprising:

A12 a game program executing system executing a game program;

one or more controllers supplying user inputs to the game program executing system;

an interface between the controllers and the game program executing system, the interface system being programmable to periodically poll the controllers without involvement of the game program executing system, wherein the interface comprises:

A12 a double buffer for storing data transferred between the game program executing system and the controllers; and

a communication RAM for storing data transferred between the game program executing system and the controllers.

14 ~~16~~ (Amended) The video game system according to claim ~~14~~¹, the interface further comprising:

a modem.

A13 15 ~~17~~ (Amended) The video game system according to claim ~~14~~¹, the controller including a vibration circuit for vibrating a housing of the controller.

16 ~~18~~ (Amended) The video game system according to claim ~~14~~¹, the controller including a read/write memory.

Sub. B2 > 21. (Amended) A video game system, comprising:

A14 a game program executing system executing a game program;

A14 a controller supplying user inputs to the game program executing system; and
an interface interfacing between the game program executing system and the controller, the interface including communication circuitry operable in a first mode in which data of a fixed size is communicated between the game program executing system and the controller and in a second mode in which data of variable size is communicated between the game program executing system and the controller, wherein the interface further comprises:

a communication memory for storing the variable size data; and
a double buffer for storing the fixed size data.

21 ¹⁹ 23. (Amended) The video game system according to claim 21, the interface further comprising:

A15 a modem.

Please add the following new claims 24-39:

Sub. B³ >
--24. A video game system, comprising:

A16 a game program executing system having connectors connectable to one or more game controllers; and

an interface between the game controllers and the game program executing system, the interface comprising a double buffered input register and a double buffered output register corresponding to each connector, each double buffered output register comprising first and second output registers for storing data from the game program executing system for output to a controller connected thereto and each double buffered input register comprising first and second input registers for storing data from a controller connected thereto for input to the game program executing system.

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~~28~~. The video game system according to claim ²³~~24~~, wherein copying of data from the first output register of one or more of the double buffered output registers to the second output register thereof is timed to start with vertical blanking of a display connected to the video game system.

²⁵
~~28~~. The video game system according to claim ²³~~24~~, wherein the second output registers are locked while data stored therein is output to the controllers connected thereto.

²⁶
~~27~~. The video game system according to claim ²³~~24~~, wherein data written to the first output register from the game program executing system is copied to the second output register.

²³
~~27~~²⁸. The video game system according to claim ~~24~~²³, wherein data output to each controller comprises a command packet and one or more data packets.

²³
~~28~~²⁹. The video game system according to claim ~~24~~²³, wherein data input from each controller comprises input data and status data.

Sub. B45

30. A video game system, comprising:

a game program executing system supplied with user inputs from one or more game controllers; and

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an interface between the controllers and the game program executing system, the interface comprising first and second different storage devices for storing data transferred between the game program executing system and the controllers, and selector circuitry for selecting between the first and second storage devices.

31. The video game system according to claim 30, wherein one of the first and second storage devices is adapted for storing variable size data and the other of the first and second storage devices is adapted for storing fixed size data.

32. The video game system according to claim 30, wherein the first storage device comprises double buffered input and output registers.

33. The video game system according to claim 32, wherein output data from the game program executing system is copied from a first register of the output buffer to a second buffer thereof after the output data is written to the first buffer.

34. The video game system according to claim 32, wherein input data from the controllers is copied from a first buffer of the input buffer to a second buffer thereof after the input data is written to the first buffer.

35. The video game system according to claim 30, further comprising:
a modem connected to the selector circuitry.

Sub. B5>

36. A method of supplying data to game program executing system of a video game system from controllers connected thereto, the method comprising:

receiving data from the controllers;

supplying the received data to selector circuitry;

supplying the received data from the selector circuitry to a first storage device accessible by the game program executing system if the selector circuitry is in a first state; and

supplying the received data from the selector circuitry to a second storage device accessible by the game program executing system if the selector circuitry is in a second state.

37. The method according to claim 36, wherein fixed-size data received from the controllers is supplied to the first storage device and variable-size data received from the controllers is supplied to the second storage device.

38. A method of supplying data from game program executing system of a video game system to controllers connected thereto, the method comprising:

selectively storing data from the game program executing system in first and second different storage devices connected to selector circuitry;

supplying stored data from the first storage device to the controllers if the selector circuitry is in a first state; and

supplying stored data from the second storage device to the controllers if the selector circuitry is in a second state.

Sub. B6 > 39. The method according to claim 38, wherein fixed-size data from the game program executing system is stored in the first storage device and variable-size data from the game program executing system is stored in the second storage device.--
